**Remarks/Arguments**

The Office Action of November 9, 2004 and the references cited therein have been carefully studied and reviewed, and in view of the foregoing Amendment and following representations, reconsideration is respectfully requested.

Claims 1- 9 and 16 - 20 have been canceled.

Claim 10 had been amended so as to more clearly patentably distinguish the present invention over the references to Ushikawa et al. (USP 5,536,320), Kitano et al. (USP 5,876,280), and Saeki et al. (USP 6,802,934), as well as the other art of record.

In this respect, the amendments to claim 10 include the incorporation therein of the subject matter of canceled claims 16 and 17. Accordingly, the rejection of claim 10 as being anticipated by Ushikawa et al. has been rendered moot. Likewise, the rejection of claim 10 as being obvious over Ushikawa et al. in view of Saeki et al. has been rendered moot.

Applicants' claimed invention is now drawn to the method entailing the embodiment of FIG. 8 in which the contamination controlling system includes temperature/humidity sensor 140 for sensing the humidity inside the substrate transfer chamber 110. According to this method, when the substrate container 106, such as a FOUP, is disposed in the standby position in which the interior of the container is exposed to the interior of the substrate transfer chamber 110, the container is filled with purging gas based on the humidity of the air in the substrate

transfer chamber 110. Considering the time that it may take to fill the container with substrates once the substrates have been processed in the apparatus (refer to pars. [0065] – [0095] of Applicants' specification), the controlling of the amount of the purging gas based on humidity according to the present invention is carried out to provide the significant advantage of preventing condensate from forming on the substrates. In this respect, please see par. [0290], for example, of Applicants' specification.

The Examiner has relied on the reference to Kitano et al. for teaching a wafer transfer chamber that is connected to a wafer processing section (chambers G1 – G4), and a contamination controlling system that comprises a temperature and humidity sensor 50. However, as distinguished from the present invention, the temperature and humidity sensor 50 of Kitano senses the humidity of clean air fed into the wafer processing section not the wafer transfer section.

More specifically, the processing apparatus 100 (FIG. 6) of Kitano et al. does include a container CR configured to accommodate a plurality of wafers, a wafer processing section 12 in which the wafers are processed, and a wafer transferring module 10 connected to the wafer processing section 12, the transferring module 10 including a wafer transfer chamber (rear room of module 10) and a load port 20 configured to support the container CR outside the wafer transfer chamber. Also, as noted by the Examiner, Kitano et al. teach a temperature-humidity sensor that is connected to a controller 39. According to

Kitano et al., the controller 39 (FIG. 15) can serve to control the temperature and humidity "in the system" based on signals fed back from the sensor 50.

**However**, sensor 50 is disposed in the wafer processing section 12 which is partitioned from the transferring module 10. Moreover, "[t]he down-flow of .. clean... air is formed independently within each of the cassette section **10**, the process section 12 and the interface section **14** ... in the system **100**" of Kitano et al. (col. 9. lines 44 – 47). **Hence, as distinguished from Applicants' invention, Kitano et al. fail to teach the step of claim 10 of measuring the humidity in the substrate transfer chamber in real time. Also, Kitano et al. clearly fail to teach the step of claim 10 of determining a value for the level of humidity in the transfer chamber at which level condensate will not form on a wafer within the container CR.**

Accordingly, the reference to Kitano et al. does not anticipate claim 10 under 35 USC 102.

Finally, turning to the rejection under 35 USC 103 based on the combination of Ushikawa et al. and Kitano et al. references, Ushikawa et al. disclose a processing apparatus in which a drier 64 is used to set the due point of the air containing $O_2$ within a transfer chamber 26 to one that will prevent a natural oxide from growing on the wafers W prior to their treatment in a processing section 6.

Ushikawa et al., like Kitano et al., thus fail to disclose at least Applicants' claimed steps of determining a value for the level of humidity in the transfer

chamber at which condensate will not form on a wafer within the container 22 while the container is at the standby position outside the transfer chamber 26, and adjusting the amount of clean air fed into the transfer chamber on the basis of that value.

Accordingly, the references even when viewed in combination do not suggest Applicants' claimed method..

In summary, then, Kitano et al. teach a wafer processing apparatus in which clean air from a clean room is directed through the sections of the apparatus. Kitano et al. also generally suggest that temperature/humidity monitoring is necessary for the clean air presumably because it is taken from the clean room and used in each of the sections to create a pressure differential that prevents contaminants from migrating between the sections and from the clean room to the sections. Finally, Kitano et al. only teach that benefits of temperature/humidity monitoring come from sensing the temperature/humidity of the air in the process section. Ushikawa et al. disclose a method of controlling the dew point of clean air fed into the transfer chamber with the aim of preventing the growth or re-growth of a native oxide on the wafers before the wafers are processed.

For these reasons, namely because of the differences between Applicant's invention, as is now claimed, and the references, including the lack of suggestion or disclosure in the references of a method wherein the humidity in a substrate transfer chamber is measured in real time while purging gas is circulated through the transfer chamber, a value is determined for the level of humidity in the transfer

chamber at which condensate will not form on a wafer within a container at a standby position whereat the interior of the container is exposed to the interior of the transfer chamber, and the amount of the purging gas being supplied into the substrate transfer chamber is controlled based on the level value to prevent the formation of particles on substrates within the container at the standby position, it is seen that the references do not anticipate or render obvious Applicants' claims. Accordingly, early reconsideration and allowance of the claims are respectfully requested.

Respectfully submitted,

VOLENTINE FRANCOS & WHITT, PLLC

By: 

Michael Stone
Reg. No. 32,442

One Freedom Square
Suite 1260
11951 Freedom Drive
Reston, VA 20190
Tel. (703) 715-0870

January 31, 2005